

PD030020 US

WHAT IS CLAIMED, IS:

1. An electronic circuit for decoding a read signal from an optical storage medium, the electronic circuit  
5 comprising:
  - a limit equalizer for amplification of high frequency read signal components without substantially increasing inter-symbol interference,
  - a Viterbi detector being coupled to an output of the  
10 limit equalizer for providing the decoded read signal.
2. The electronic circuit according to claim 1, wherein the limit equalizer having an adjustable high boost coefficient for amplification of the high frequency  
15 read signal components and means for adapting the high boost coefficient based on the decoded read signal provided by the Viterbi detector and the equalized read signal provided by the limit equalizer.
3. The electronic circuit according to claim 1, wherein  
20 the equalized read signal provided by the limit equalizer having an amplitude signal level and an intermediate signal level, the electronic circuit further comprising:
  - means for determining a required intermediate signal  
25 level based on a detected amplitude level,
  - means for detecting an actual intermediate signal level of the equalized read signal,

PD030020 US

- control means for adapting the high boost coefficient based on a comparison of the required intermediate signal level and the actual equalized read signal.

- 5 4. The electronic circuit according to claim 3, wherein the means for determining the required intermediate signal level comprising an envelope detector for detecting the actual amplitude.
- 10 5. The electronic circuit according to claim 3, wherein the control means comprising an integrator for integration of a deviation between the required intermediate signal level and the actual equalized read signal provided by the limit equalizer.
- 15 6. The electronic circuit according to claim 1, wherein the optical storage medium being a blu-ray disc.
7. An electronic device for reading an optical storage medium, the electronic device comprising:
  - means for providing a read signal from the optical storage medium,
  - 20 - a limit equalizer for amplification of high frequency read signal components without substantially increasing inter-symbol interference,
  - a Viterbi detector being coupled to an output of the limit equalizer for providing the decoded read  
25 signal.
8. A method for reading an optical storage medium, the method comprising the steps of:

PD030020 US

- providing of a read signal from the optical storage medium,
  - equalising of the read signal by means of a limit equalizer for amplification of high frequency read signal components without substantially increasing inter-symbol interference,
  - performing a Viterbi detection on the equalized read signal to provide the decoded read signal.
9. The method according to claim 8 further comprising adapting a high boost co-efficient for amplification of the high frequency read signal components based on the decoded read signal and the equalized read signal.
10. The method according to claim 8, wherein the equalized read signal having an amplitude level and an intermediate signal level, the method comprising:
- determining a required intermediate signal level based on a detection of the amplitude level,
  - determining an actual intermediate signal level of the equalized read signal,
  - determining a deviation signal based on the actual intermediate signal level and the required intermediate signal level,
  - integrating of the deviation signal to provide an adapted high boost co-efficient.
11. Computer program product, such as digital storage medium, comprising program means for decoding a read signal from an optical storage medium by the steps of:

PD030020 US

- providing of a read signal from the optical storage medium,
- equalising of the read signal by means of a limit equalizer for amplification of high frequency read signal components without substantially increasing inter-symbol interference,
- performing a Viterbi detection on the equalized read signal to provide the decoded read signal.